

## **REMARKS**

Applicants thank the Examiner for the careful consideration given to this application. Reconsideration and allowance are now respectfully requested in view of the amendments above and the following remarks. Claims 1-35 and 37-38 are pending in this application. Claims 1, 25 and 26 are the independent claims. Claim 26 is amended to incorporate the elements previously recited in claim 36. Accordingly, claim 36 is cancelled without prejudice or disclaimer. Claims 37-38 are added. Claims 1-25 were previously withdrawn.

### **Claim Rejections under 35 U.S.C. §102**

Claims 26-28 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,298,324 to Soulier (hereinafter “Soulier”). This rejection is respectfully traversed.

Applicants submit that Soulier fails to teach or suggest each of the elements of claims 26-28. Claim 1, in part, recites an apparatus “capable of subjecting the raw material to controlled pressure increases and decreases using compressed gas in conjunction with microwave heating.” Soulier fails to teach or suggest these features.

Although Soulier discloses an apparatus including an outlet through which compressed air may flow, this outlet does not allow for pressurization/depressurization during microwave heating. The outlet disclosed in Soulier was designed to allow flow of compressed air to eject the molded articles and to cool the mold. Both of these operations are carried out after microwave heating has ceased. See, for example, Col. 4, lines 63-67 of Soulier. Soulier does not teach or suggest a gas outlet capable of controlling pressure during the microwave process. For a gas outlet to be capable of being used during microwave heating, it would need to be fitted with a suitable choke system which could contain microwaves yet allow compressed gas to flow in or out during microwave heating – Soulier does not teach or suggest such a system. See, for example, item 4 of Figure 1 of the present application.

Furthermore, the apparatus disclosed in Soulier could not be pressurized. Soulier discloses that the cavity is of rectangular design, which is inherently unsuitable as a cavity required to withstand significant pressure. See item 11 of Figure 2 of Soulier. The apparatus

disclosed in Soulier also does not include a clamping system for the two cavity halves, which would be required in an apparatus that could contain significant pressure.

In addition, Soulier fails to teach or suggest “wherein the mould is substantially microwave transparent and is coated with a susceptor material,” as recited in amended claim 26.

Based on the distinctions noted above, Applicants submit that Soulier fails to teach or suggest each of the elements of claim 26. Each of claims 27-35 depends on claim 26 and incorporates all of the elements of claim 26, in addition to the further elements recited in claims 27-35. Hence, claims 27-35 are also not anticipated or made obvious based on the disclosure of Soulier. Therefore, Applicants respectfully request that the rejection of claims 26-28 based on 35 U.S.C. §102(b) be withdrawn.

#### **Claim Rejections Under 35 U.S.C. §103**

Claim 29 was rejected under 35 U.S.C. §103 (a) as being unpatentable over Soulier in view of U.S. Patent No. 4,134,942 to Mirr (hereinafter “Mirr”). This rejection is respectfully traversed.

Applicants submit that the combination of Soulier and Mirr fails to teach or suggest the combination of elements recited in claim 29. Mirr was relied upon for a disclosure of an outlet valve in an apparatus for producing foamed articles. As noted above, claim 29 is dependent on claim 26, and therefore incorporates all of the elements of claim 26. Mirr does not cure the deficiencies of Soulier outlined above with respect to claim 26.

Mirr increases pressure using compressed gas prior to applying RF heating. This is apparent from the drawings where the male mold half/electrode is not in place when the pressure is applied, therefore RF heating cannot take place. An overhead heater is used to soften the plastic, which is then pre-stretched by increasing pressure, and then formed to take the shape of the female part using vacuum.

Based on the distinctions noted above, Applications submit that the combination of Soulier and Mirr fails to teach or suggest the combination of elements recited in claim 29. Therefore, Applicants respectfully request that the rejection of claim 29 based on 35 U.S.C. §103(a) be withdrawn.

Claims 30-34 were rejected under 35 USC 103 (a) as being unpatentable over Soulier in view of U.S. Patent No. 5,010, 220 to Apte et al. (hereinafter "Apte"). This rejection is also respectfully traversed.

Applicants also submit that the combination of Soulier and Apte fails to teach or suggest the combination of elements recited in claims 30-34. The Office Action relied upon Apte for a disclosure an isostatic press, which is subject to microwave energy heat. The Office Action further stated that Apte teaches an embodiment wherein a pressure vessel comprises a chamber sealed by a lid having a microwave transparent window such that microwaves are transmitted through the window. Similar to claim 29, claims 30-34 are also dependent on claim 26 and therefore incorporate all of the elements of claim 26. Apte does not cure the deficiencies of Soulier outlined above with respect to claim 26.

Furthermore, the Office Action alleged that it would be obvious to configure the apparatus of Soulier with the temperature range and frequency of Apte because such ranges are typical of conventional magnetrons. Applicants disagree on the grounds that the magnetron only determines the upper temperature range possible, not the actual temperature range achieved. This is a function of not only the magnetron power, but the cavity design, mold design, mold dielectric properties and dielectric properties of the material being processed.

Based on the distinctions noted above, Applications submit that the combination of Soulier and Apte fails to teach or suggest the combination of elements recited in claims 30-34. Therefore, Applicants respectfully request that the rejection of claims 30-34 based on 35 U.S.C. §103(a) be withdrawn.

#### **Disclaimer**

Applicants may not have presented all possible arguments or have refuted the characterizations of either the claims or the prior art as found in the Office Action. However, the lack of such arguments or refutations is not intended to act as a waiver of such arguments or as concurrence with such characterizations.

**CONCLUSION**

In view of the above, consideration and allowance are respectfully solicited.

In the event the Examiner believes an interview might serve in any way to advance the prosecution of this application, the undersigned is available at the telephone number noted below.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 27606-00001-US1 from which the undersigned is authorized to draw.

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Respectfully submitted,

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